

What is claimed is:

Sub A2

1. A method for monitoring a control system comprising a plurality of control units, preferably for an optical measurement device or observation device, wherein a control station communicates with the control units for purposes of detecting status data and the control station generates pictures of total statuses of the control system based on this status data, said method comprising the steps of:

incorporating at least one microprocessor unit with master capability in the communication between the control station and the control units; and

using said at least one microprocessor unit with master capability communicating with at least one of the control units for purposes of detecting status data and communicating with the control station for purposes of conveying the detected status data.

2. The method according to claim 1, wherein the incorporation is carried out within time limits.

Sub A3

3. The method for monitoring a control system as set forth in claim 1, wherein the capability of detecting status data is transferred partially and/or within time limits from the control station to at least one of the control units, wherein the at least one control unit communicates with at least one of the other control units for purposes of detecting status data and communicates with the control station for purposes of conveying the detected status data.

Sub A4

4. The method according to claim 1, wherein control units with master capability and control units without master capability are interconnected via a bus, and the control station communicates with the rest of the control units via a two-path connection to one of the control units with master capability, wherein the capability of detecting status data is assigned to one or more of the existing control units with master capability.

5. The method according to claim 3, wherein the transfer of capability of detecting status data is carried out using existing communications paths by downloading corresponding executable programs from the control station to the respective control unit.

6. The method according to claim 3, wherein assigning and/or taking away the capability of detecting status data using existing communications paths is carried out by activating or deactivating executable programs which are stored in the respective control unit or which are transmitted by downloading.

7. The method according to claim 1, wherein the detection of status data by the microprocessor unit with master capability or by the enabled control unit is brought about when changes in status occur in the associated control units.

8. The method according to claim 1, wherein the status data detected by the microprocessor unit with master capability or by the enabled control unit are transmitted to the control station when called up.

9. The method according to claim 2, wherein the status data detected by the microprocessor unit with master capability or by the enabled control unit are transmitted to the control station at predetermined time intervals.

10. A control system, preferably for an optical measurement device or observation device comprising:  
a plurality of control units;  
a control station which, when required, generates a map of the overall status of the control system based on status data of the individual control units; and  
at least one of the control units having the capability of detecting and/or automatically assessing status data of associated other control units and transmitting the detected status data and determined assessment to the control station.

Sub  
AS  
Control

Sub  
AS

00734500-120700